

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) N-207

P1. Other Identifier: National Rotocraft Technology Center/Ames History Office, Administrative Support Facility

***P2. Location:** ☒ Not for Publication ☐ Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Mountain View, Calif.

Date: 1995

***c. Address** 385 King Road

City Moffett Field

Zip 94035

***e. Other Locational Data:**

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building N-207 is located on King Street, just east of Building N-206. Building N-207 is a 31,300 sq. ft. two-story office and administration building with a concrete foundation, concrete walls, and a flat roof. The east/west bay along King Street is one-story and the rear of the building is two-story. The building's massing is simple and ornamental detail is minimal. This building features simple, flat, horizontal concrete bands that run across each façade. The bands articulate the first and second floors and give a definite horizontality to the building. The building has three over three steel-frame awning-sash windows on the first floor that are sandwiched between the concrete bands. The King Street windows appear in sets of three and are separated by concrete piers with grooves that align with the window mullions. The windows on the remaining façades and on the second floor vary in size and type and are not regularly spaced. The building's main entry is emphasized with a simple concrete awning with rounded corners. The entry doors are aluminum storefront and are not original to the building. Other doors are flush, metal doors. A curved ramp leading to the entrance has been added on the King Street side. Building N-207 has been retrofitted with an exterior steel stair on the east side and has exposed mechanical equipment vents throughout the east, south and west sides. The front of the building has screened mechanical equipment on the roof. A two-story height, "L" shaped addition on the south side is constructed of steel framing and ribbed metal, known as N-207A that houses the blade storage facility for the Unitary Plan Wind Tunnels.

This building appears to be in good condition.

***P3b. Resource Attributes:** (list attributes and codes) HP 6 – 1 to 3 Story Commercial Building; HP39 – Other, Research

***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5a. Photo



P5b. Photo: (view and date)

View of north façade, (10/02/07)

***P6. Date Constructed/Age and Sources:** 1946

***P7. Owner and Address:**
United States of America as
represented by National Aeronautics
and Space Administration (NASA)

***P8. Recorded by:**
Page & Turnbull, Inc.
724 Pine Street
San Francisco, CA 94108

***P9. Date Recorded:** 10/19/07

***P10. Survey Type:**
Reconnaissance

***P11. Report Citation:** Lori Neff,
*Department of Parks and Recreation
– Historic Resources Inventory "Bldg.
N207, Plant Engineering Facilities,"*
(1995).

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 3

*NRHP Status Code 6Z

*Resource Name or # N-207

- B1. Historic name: Fluid Mechanics Laboratory
B2. Common name: National Rotorcraft Technology Center and Ames History Office
B3. Original Use: Laboratory B4. Present use: Office and research facility

*B5. **Architectural Style:** Moderne with 20th-Century Industrial influences

*B6. **Construction History:** (Construction date, alterations, and date of alterations)

1946 – Date of Construction; 1958 – Addition; 1961, 1970s & 1980s – Extensive interior alterations

*B7. **Moved?** ☒ No ☐ Yes ☐ Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

Significant architectural features include concrete exterior, steel-sash windows, and concrete entry canopy.

B9a. Architect: National Advisory Committee for Aeronautics (NACA) Engineers

b. Builder:

*B10. **Significance:** Theme Post-War Science and Space Exploration Area NASA Ames Research Center

Period of Significance 1940-1958 Property Type Research Facility Applicable Criteria n/a

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Originally used as the Ames Supersonic Tunnel Laboratory Building, Building N-207 originally housed the 1x3 ft small, supersonic pilot model, which has since been demolished. Today, Building N-207 is an office and research facility that functions as a center for calibrating balances for the Ames wind tunnels, as well as for outside projects. This building also houses the Ames History Office. In the past, it has also housed an advanced aerodynamic heating simulator.

Building N-207 was one of several research and support buildings built between 1940 and 1958. Founded in 1939, Ames Research Center was the second aeronautic research facility built for the National Advisory Committee for Aeronautics (NACA). This research center was vital in the development of the field of aeronautical research and science. Along with new research facilities, such as wind tunnels and testing facilities, several support buildings were constructed for the staff, including offices, machine shops, manufacturing facilities, and laboratories. During this time period, these research and support buildings were rendered in an architectural vocabulary, which allowed for a variety of uses and a cohesive campus setting. These buildings were most often, one and two stories in height with concrete structural systems, unpainted concrete exteriors (with scored concrete detailing), and steel or wood-sash awning or hopper windows. They expressed Moderne architectural details with their scored exteriors, tripartite concrete panels (located between windows and doors), concrete entry canopies, and rectilinear configurations. Additionally, these buildings exhibited influences of 20th-Century Industrial architecture with their smooth, concrete exteriors and steel-sash awning and hopper windows. The exterior of this building retains more historical significance than the interior, which has been extensively altered over time. This building possesses integrity of location, setting, materials, and association. Due to the elimination of the 1x3 ft tunnel test section and the extensive alterations, the building is no longer eligible for individual listing in the National Register of Historic Places or the California Register of Historical Resources.

B11. Additional Resource Attributes: (List attributes and codes) (HP6) -- Office Building; (HP39) -- Research Facility

*B12. **References (see continuation below):**

- Lori Neff, *Department of Parks and Recreation – Historic Resources Inventory “Bldg. N207, Plant Engineering Facilities,”* (1995).
- Edwin Hartman, *Adventures in Research: A History of Ames Research Center, 1940 – 1965* (NASA SP-4302, 1970).

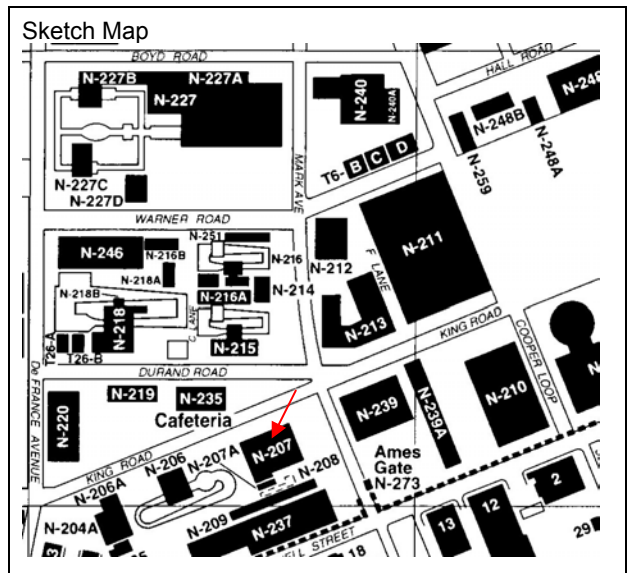
B13. Remarks:

In 1995, Section 110 survey documentation of the NASA Ames Research Center was submitted to the California State Historic Preservation Office (SHPO). In 2005, Page & Turnbull performed a reconnaissance-level historic resource survey of all properties at the NASA Ames Research Center.

*B14. **Evaluator:** Rich Sucre, Page & Turnbull, Inc.

*Date of Evaluation: 10/19/07

(This space reserved for official comments.)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 3 of 3

Resource Name or # N-207

*Recorded by Rich Sucré – Page & Turnbull

*Date ☒ Continuation ☐ Update

B. 10 Significance (cont'd)

5. ADVANCED ENTRY HEATING SIMULATOR

DESCRIPTION:

The Advanced Entry Heating Simulator is used for aerodynamic-heating and thermal-protection-materials studies of vehicles entering planetary atmospheres. It consists of a 3M.W. arc-heated supersonic wind tunnel employing vortex and magnetic field methods of arc stabilization, and operates in conjunction with a broad band radiative heating system which can furnish an additional 3,000 BTU/ft²/sec. to 0.6-inch diameter models. Test gases include air and nitrogen with flow rates from 0.05 to 0.5 lbs/sec. Data are recorded on oscillographs or magnetic tapes utilizing calorimeters, pyrometers, and pressure cells. Models with specimen diameters from 0.5 to 2.0 inches can be accommodated. Run-time is five minutes maximum.

PERFORMANCE:

Stream Enthalpy	2,000 to 15,000 BTU/lb.
Mach numbers	2 to 5
Stagnation pressure	0.1 to 3.0 atmospheres
Arc Chamber pressure	1.0 to 15.0 atmospheres
Nozzle Exit pressure	0.0005 to 0.02 atmospheres
Nozzle Exit diameters	1.6 to 7 inches

STATUS:

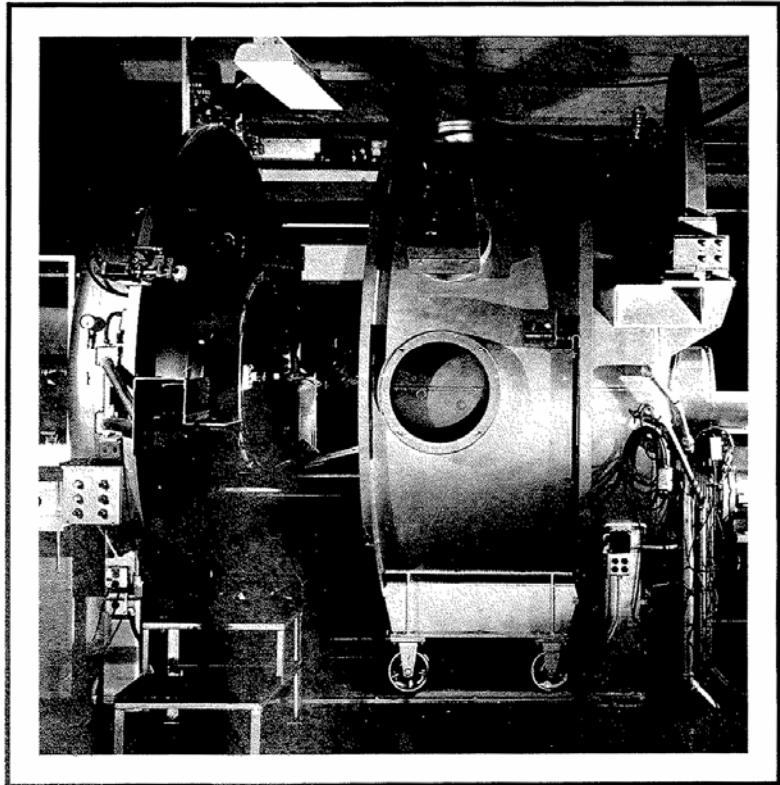
Operational since 1969

JURISDICTION:

Thermo and Gas-Dynamics Division
Thermal Protection Branch
Howard K. Larson

LOCATION:

Building N-207



***B12. References (cont'd):**

- Elizabeth A. Muenger, *Searching the Horizon: A History of Ames Research Center, 1940 – 1976* (NASA SP-4304, 1985).
- Glenn Bugos, *Atmosphere of Freedom: Sixty Years at the NASA Ames Research Center* (NASA SP-4314, 2000).
- National Aeronautics and Space Administration, *Technical Facilities Catalog*, Volume 1, publication NHB 8800.5A (1), October 1974.
- Technical Information Division, Ames Research Center, *Ames Research Facilities Summary*, 1974.
- Donald D. Baals and William R. Corliss, *Wind Tunnels of NASA*, NASA SP-440, 1981.